4. PRINT AREA

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2. Press Section

[Theory of Operation]

1. Press System

- Conversion of rotation to Up-and-down motion via Pressure cam

The Pressure cam, which is attached to the Main pulley and contained in the mechanical drive system, continuously rotates clockwise via the Main belt driving the Main pulley when the Main motor rotates. The rotation of the Pressure cam provides the drive for the Linking plate.
As the cam follower of the Linking plate contacts the Pressure cam, the high and low points of the cam convert the rotation movement of the cam to an up-and-down motion of the Linking plate.

- The Up-and-down motion of Pressure Hook

The up-and-down motion of the Linking plate is conveyed to the Pressure hook through the Pressure link. The Pressure hook moves up and down with the Pressure shaft as the fulcrum.

- Operation of Pressure Solenoid

The Pressure solenoid, which is attached to the Pressure hook and Hook lever assembly, is used to engage the Hook lever assembly with the Pressure lever.

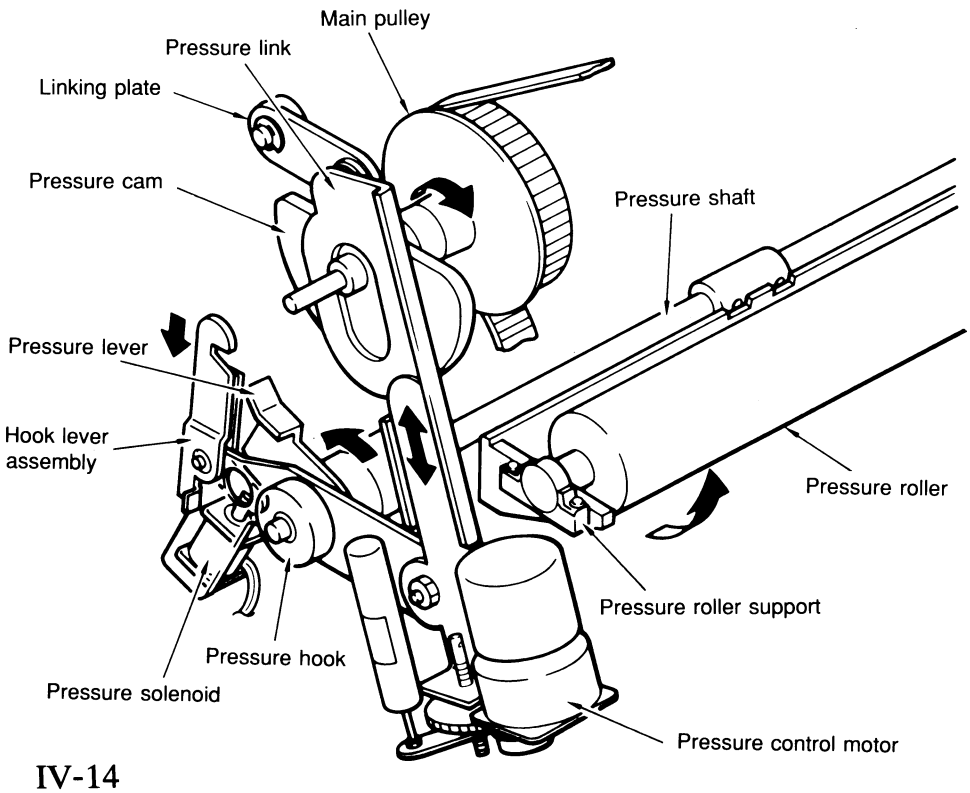
- Control of Pressure Solenoid

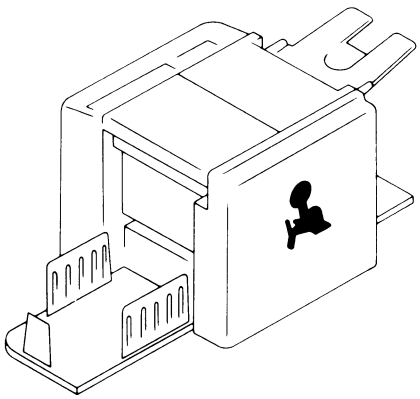
The Pressure solenoid is OFF except during the printing operation and ON when the paper is detected by the Paper sensor with the Print signal output.
When the solenoid is turned ON, the Hook lever assembly is directly engaged with the Pressure lever.

Note: The Pressure solenoid is turned OFF when the light path of the Pressure detection sensor has just been opened by the Pressure Disc.

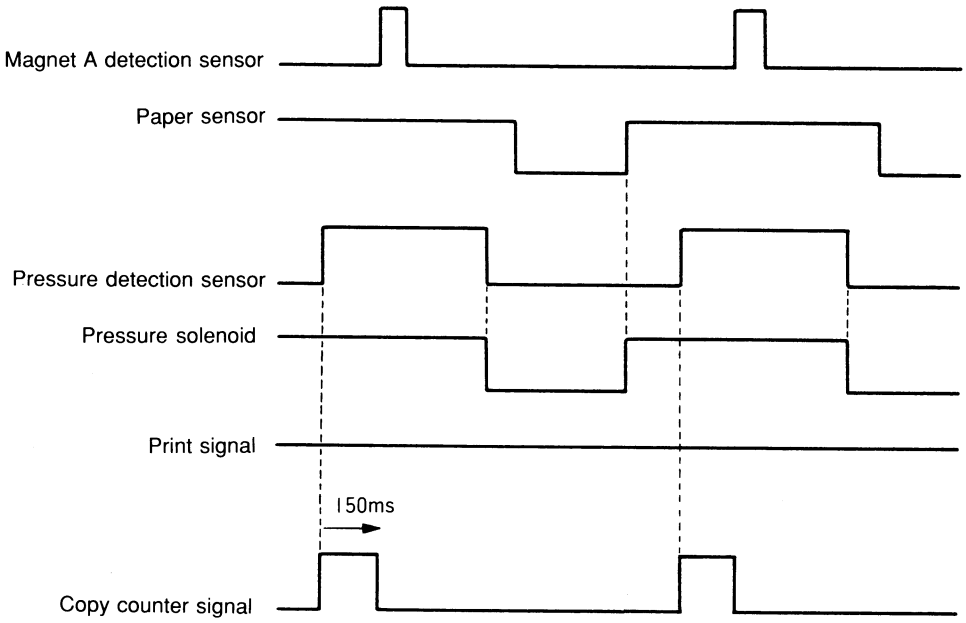
- Lifting up of Pressure roller

The Pressure lever is connected to the Pressure shaft.
Therefore when the Hook lever assembly is engaged with the Pressure lever by the Pressure solenoid and the downward motion of the Hook lever pulls down the Pressure lever, the Pressure shaft turns counterclockwise.
To the Pressure shaft is attached the Pressure roller support on which the Pressure roller is placed. Therefore, when the Pressure shaft rotates counterclockwise, the Pressure roller is lifted up, pressing a sheet of paper against the Drum.





Press System



2. Pressure Regulation System

- Speed-change mode

In the speed-change mode, if the print speed is changed, the Pressure control motor is automatically activated, changing the print pressure to five levels to regulate consistent density regardless of difference in the print speed.

The print (roller) pressure is reduced when the speed is reduced, and is increased when it is increased.

- Density-change mode

In the density-change mode, the print speed is automatically reset and remains in the medium speed **(100 copies per minute)**.

The user can then select five levels of print density with the buttons on the control panel.

The selection activates the Pressure control motor, which increases or decreases the pressure of the Pressure roller against the Drum depending on the setting selected.

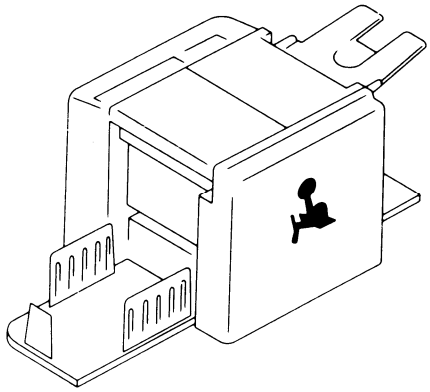
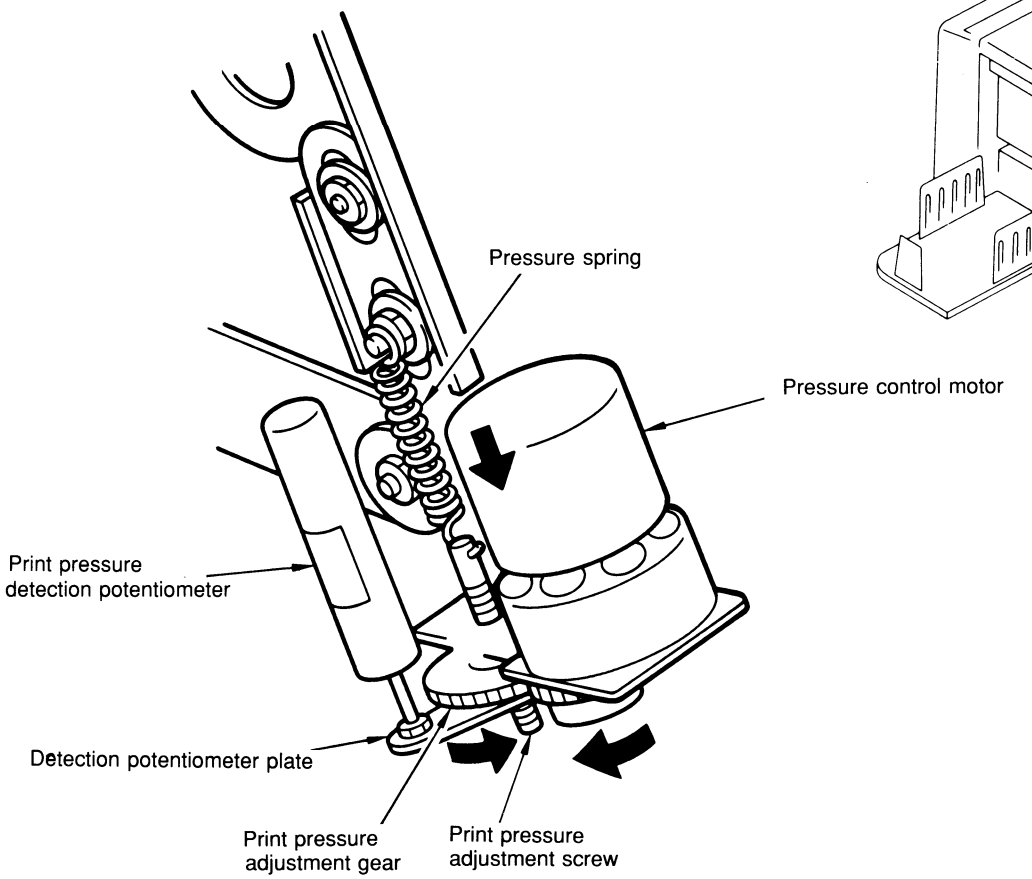
- Pressure regulation system

The Pressure control motor rotates up or down to a specified position.

This motion is conveyed to the Print-pressure adjustment screw via the Print-pressure adjustment gear, changing the tension (pull power) of the Pressure spring, which changes the print pressure.

Example: If the density or speed selection is increased, the Pressure control motor rotates clockwise to apply more tension to the Pressure spring.
As a result,the pressure of the Pressure roller increases.

- Detection of the set rotation quantity of Pressure control motor

The rotation quantity of the Pressure control motor is detected by the Print pressure detection potentiometer through the up-and-down motion of the Detection potentiometer plate driven by the rotations of the Print pressure adjustment gear and screw.

When a specified quantity of rotations is detected by the Print pressure detection potentiometer, the Pressure control motor is turned off.